ENVIRONMENTAL ASSESSMENT AND INNOVATION DIVISION (EAID)

Joint Evaluation and Semiannual Status Report

Grant Title: Advancing Headwaters Aquatic Resource Science and Developing Practical Applications for Wetland Program Development

EPA Assistance #   CD-96347101

Report #:   2nd Semiannual Status Report

Report Date: August 1, 2017

Reporting Period Dates: January 1, 2017- July 31, 2017

Budget/Project Period Dates: 10/01/2016-12/31/2020

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Overall Funding

Federal Funding Total	$ 900,000
Federal Funding This Action	$ 450,000
Federal Funds Expended	$ 94,810
Federal Funding Commitments	$ 212,000
Federal Funds Total Remaining	$ 593,190
State Funding:	$ 300,000
State Funding Expended	$ 20,836
State Funding Remaining	$ 279,164

GOALS/OBJECTIVES:

To address three critical areas of program development or program focus areas: 1) revision of current wetland program plan (WPP); 2) restoration and compensation project deficiencies through a geospatial vegetation community predictor tool; and 3) advance basic scientific understanding of headwater aquatic resources through characterization of their chemical, physical and biological attributes and identification of geomorphic legacy alterations overlooked or masked by modern land uses. This project continues efforts to establish better ecological/resource models to produce scientifically defensible measures that: establish the need for restoration, provide the basis for developing defensible restoration practices, and measure success as directed in the United States Army Corp of Engineers' (USACE) and EPA's Final Joint Federal Mitigation Rule published in April 2008 (33 C.F.R. §§ 332.1-332.8; 40 C.F.R. §§ 230.91-230.98).

PLANNED VS ACTUAL ACCOMPLISHMENTS AND ACHIEVED ENVIRONMENTAL RESULTS:

The planned and actual accomplishments and achieved environmental results are discussed for each PFA separately, below.

Program Focus Area 1: WPP Revisions	
1	Updated and approved WPP Plan incorporating input from additional partners.
2	An expanded network of partners to assist in program development.

The following tasks were worked on during the reporting period, completed or are on track to be completed:

1. Update of WPP Activities completed previously by DEP and its partners.
2. Identification of priority areas of interest within the program is in progress. Input from program staff was solicited late in the reporting period form DEP staff and results are being compiled from the survey. Additional efforts are planned at program meetings in late 2017 or early 2018 to facilitate further input. Coordination with other DEP programs is planned during that time frame as well.
3. Additional external partners have been identified and are under consideration for inclusion at this time, but none have bene contacted during this report period.
4. Several examples of other state WPPs have been obtained and are being evaluated for use as a basis for the WPP format revisions in the next report period.

Program Focus Area 2: Vegetation Predictor Tool	
1	Web-based geospatial vegetation community predictor tool.
2	Development of a vegetation database architecture standard.
3	Assembly of a more complete vegetation plot community dataset for PA.

The following tasks were worked on during the reporting period, completed or are on track to be completed:

1. The subaward to PA DCNR has been finalized and is effective 7/1/2017.
2. Meetings with the various project partners, to develop the additional detailed work plans which accomplish the objectives of PFA2, are planned.
3. WPC has been organizing their plant community database (EcoObs) to ensure it contains all of the information needed to populate the background information for the predictive planting tool. This will also facilitate the transfer of data from EcoObs to the predictive planting tool.
4. During the process of organizing EcoObs, WPC staff compiled a list of underrepresented plant communities in the database. WPC staff are now working on gathering field data on underrepresented communities to fill these data gaps.

Program Focus Area 3: Headwater Aquatic Reference Resource System	
1	Conceptual headwater aquatic resource models.
2	Characterization of representative reference standard headwater types including attributes related to vegetation, geomorphology, hydrology and biological assemblages.
3	Conceptualized watershed geomorphic legacy alteration models and the effects of geomorphic legacy alterations on headwater resources.
4	Characterization of watershed geomorphic legacy alteration types, geographic distribution and long term effects.
5	Develop conceptual and qualitative models to characterize the departure from reference standard sites that watershed geomorphological legacy alterations exhibit including effects on vegetation, geomorphology, hydrology, water chemistry and biological assemblages.
6	Demonstration of geospatial analysis model to predict/identify presence and extent of watershed geomorphic legacy alterations in three physiographic provinces (Allegheny Plateau, Ridge and Valley and Piedmont).
7	Demonstration of geospatial analysis model to estimate quantities of selected constituents for selected types of watershed geomorphic legacy alterations in three physiographic provinces (Allegheny Plateau, Ridge and Valley and Piedmont).
8	Monitor and evaluate effectiveness of headwater restoration best practices.

The following tasks were worked on during the reporting period, completed or are on track to be completed:

1. A funding agreement was finalized with USGS to complete one additional year of water quality monitoring at the Big Spring Run restoration project. Monitoring is on-going and will continue into the next reporting period.
2. Since the subaward to PA DCNR is effective work related to HARRS site selection and data compilation will begin during the next reporting period.
3. Preliminary coordination meetings with the other project partners stalled due to concerns about the potential for federal funding reductions and have been put on hold until second year funding is received. Partners are still committed to the project but considering the potential effect of losing a significant portion of the funding more immediate program areas were addressed in the project but significant progress is anticipated in the next reporting period.
4. The additional grant sub-award agreements will be completed during the next reporting period. Meetings with project partners, to develop the detailed work plans to accomplish the objectives of PFA3 are being scheduled.

QUALITY ASSURANCE PROJECT PLAN UPDATE:

No revisions or updates at this time.

HIGHLIGHTS:

Additional state funding was secured for additional activities related to the HARRS project that are outside the current project's scope, however they will nevertheless complement the efforts of this grant project.

POLLUTION PREVENTION ACCOMPLISHMENTS:

N/A.

EQUIPMENT:

N/A.

AREAS OF CONCERN - DEFICIENCIES/CORRECTIVE ACTION:

One of the two positons supported through the grant became vacant late in the reporting period, it is uncertain at this time if it will be filled or not, especially given the uncertain future of grant funds.

RENEGOTIATED COMMITMENTS:

N/A

SUGGESTIONS FOR EPA SUPPORT:

None at this time.

RESOLUTION PLAN AND TIMING ACTION ITEMS:

N/A. No deficiencies to resolve.

TARGET COMPLETION DATE:

N/A. No deficiencies to resolve.